**ABSTRACT**

**BACKGROUND:**

Bladder injuries are rare in occurrence. They can either be non-iatrogenic or iatrogenic. The non-iatrogenic bladder injuries are most common among urological injuries involving the lower urinary tract and often associated with other major injuries. Iatrogenic bladder injury can either be external mostly occurs during obstetric and gynaecologic procedures or internal most commonly seen in transurethral resection of the bladder. The methods of diagnosis and management of bladder injury are well established. The preferred evaluation is by retrograde computed tomography cystography and managed accordingly depending on type of bladder injury..

**METHODS:**

Patient with abdominal trauma diagnosed of bladder injury and patient who sustained bladder injury during surgical procedures from a period of July 2016 to June 2017 were taken into account and a retrospective study was done. The type of bladder injury associated with blunt injury abdomen, penetrating injury abdomen and other surgical procedures, time needed for diagnosis, mode of diagnosis, methods of treatment and patient outcome was analysed.. Diagnosis time was defined as time interval between patient arrival to establishment of diagnosis either by imaging or laparotomy. Management

depends on type of bladder injury and treated accordingly. Bladder contusion was treated conservatively. Extraperitoneal bladder rupture managed with suprapubic catheterization except for few extraperitoneal rupture needed laparotomy. Intraperitoneal bladder rupture patients underwent laparotomy and primary repair. The injury severity scale (ISS), length of hospital stay, complication and morbidity were used to evaluate patient outcome**.**

**RESULTS:**

The mean age of patients was 41years and most of them sustained injury by road traffic accident accounting for 72.7 % and 63.6 % presented with hematuria. Among 22 patients 17 patients subjected to imaging studies i.e. about 77 %. 9 of them underwent retrograde CT cystography, 4 patients underwent CT abdomen and pelvis along with retrograde CT cystography because of doubtful CT abdomen and pelvis and 2 patients were taken up for emergency laparotomy without imaging and 3 patients had iatrogenic bladder injury diagnosed on table. In our study intraperitoneal bladder rupture was most common type of bladder injury accounting for 41%, which was managed by primary closure.

Patient outcome was assessed by Injury severity score, length of hospital stay and complications. In our study patients who have associated pelvic fracture with bladder injury had a mean injury severity score 25.89 but there was no difference in length of hospital stay among patients with or without

pelvic fracture. Patients who had more ISS > 40 had a longer length of hospital stay and also in patients who were undergoing laparotomy for bladder repair, mostly in patients of iatrogenic injury and other abdominal viscera injury. Fewer complications were seen our study, only in 2 patients. There was no bladder related mortality in our case series.

**CONCLUSION:**

- Bladder trauma either non-iatrogenic or iatrogenic is uncommon.
- Blunt trauma is common cause of bladder injury.
- Pelvic fracture is most common injury associated with bladder trauma.
- Intraperitoneal bladder rupture is more common than extraperitoneal bladder rupture.
- Retrograde CT cystography is preferred mode of investigation for diagnosing bladder trauma.
- All patients of intraperitoneal bladder rupture, penetrating injury, iatrogenic injury and extraperitoneal bladder injury undergoing laparotomy for other abdominal trauma, pelvic fracture fixation, bladder repair is done. Isolated extraperitoneal bladder rupture managed by suprapubic catheterization and bladder contusion managed conservatively.

Key Words: Bladder Injury, Iatrogenic Bladder Trauma, Non-Iatrogenic Bladder Injury, Retrograde CT Cystography.